

CLIMATOLOGICAL DATA FOR DECEMBER, 1912.

DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

B. BUNNEMEYER, District Editor.

GENERAL SUMMARY.

Weather conditions for the current month closely resembled those for December, 1911. They were marked by persistently cold weather throughout the district and by frequent and heavy precipitation in the southeastern portion of Texas. In the western half of the district the sunshine was abundant and there were but two general storm periods, each of short duration, which gave slightly less than the normal amount of moisture. In the eastern half the sunshine was decidedly deficient and the number of rainy days large, rain occurring daily from the 1st to 12th and from the 20th to 23d, and at intervals during the other parts of the month. While the precipitation averaged above the normal in Texas the area of excessive rainfall was confined to upper coast and adjacent interior counties where the monthly amounts ranged from 6 to over 16 inches, the latter amount being the heaviest ever recorded in the State in December. The precipitation was, however, generally well distributed throughout the month and most of it soaked into the ground or remained on the surface as snow as evidenced by a small run-off. Along the upper Texas coast the lowlands were submerged during part of the month.

The average number of days with 0.01 inch or more of precipitation was 3 in Colorado and New Mexico, and 7 in Texas. The greatest and least monthly amounts of precipitation were, respectively, in Colorado 1.11 inches at La Veta Pass and a trace at Manassa; in New Mexico 2.00 inches at Glorieta Ranch and a trace at Los Lunas; and in Texas 16.57 inches at Mont Belvieu and 0.15 inch at Mount Blanco. Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred at but 6 stations, all in Texas, the heaviest being 3.60 inches at Columbus on the 4th.

The snowfall was heavy in portions of southern New Mexico, but was light at the higher and northern stations, and the stored depth was small. At the close of the month the depth on the ground in the extreme upper Rio Grande watershed at an elevation of about 8,200 feet was only 6 inches, which is 7 inches less than a year ago. The greatest monthly fall in Colorado was 17.5 inches at La Veta Pass, in New Mexico 36.2 inches at Glorieta Ranch, and in Texas 4 inches at Seymour and at Snyder.

TEMPERATURE.

The average daily temperature deficiency was 3° in Colorado, 3.8° in New Mexico, and 3.9° in Texas. There were no marked cold waves during the month and the changes from day to day as well as the monthly range of temperature were small for the season. Over a large area extending well inland from the Texas coast there were no killing frosts or freezes during the month. The

warmest weather occurred between the 1st and 5th and between the 13th and 17th, while the coldest occurred between the 6th and 8th and between the 21st and 25th. The average diurnal range of temperature varied from nearly 12° on the Texas coast to about 39° in the extreme northwestern portion of the district.

The highest and lowest temperatures reported were, respectively, in Colorado 53° at Manassa on the 15th and -29° at Hermit on the 6th; in New Mexico 72° at San Marcial on the 3d and -22° at Virsylvia on the 22d; and in Texas 88° at Bay City on the 5th and 6° at Plainview on the 24th. The local monthly means ranged from 9.3° to 17.5° in Colorado, from 14.2° to 40.4° in New Mexico, and from 36.4° to 58.8° in Texas.

PRECIPITATION.

The average precipitation for the Rio Grande watershed was 0.70 inch, which is slightly less than the normal amount. The deficiency of precipitation was most marked at the higher mountain stations in New Mexico, while moderate excesses occurred below Marathon, Tex. Much of the precipitation in the upper portions of the watershed was in the form of snow, but while heavy snowfalls were reported from some New Mexico stations, the stored depth at the close of the month was small.

The precipitation over the Rio Pecos watershed was light in New Mexico, except between Roswell and Fort Stanton, and south of Carlsbad, where the monthly amounts exceeded the normal. The Texas portion of the watershed received about double the usual amount of moisture, bringing the average for the watershed as a whole up to 0.78 inch, which is very nearly the December normal.

The Texas watersheds received more than the normal amount of moisture, the excesses of the various watersheds ranging from 0.04 inch for the Sabine to 2.41 inches for the Neches. The rainfall was heaviest over the upper coastal plains and over the lower portions of the Brazos, Trinity, and Neches watersheds. The following are the average amounts in inches and hundredths for the various Texas watersheds: Nueces, 2.37; San Antonio, 2.43; Guadalupe, 2.78; Lavaca, 3.40; Colorado, 2.18; Brazos, 2.59; Trinity, 3.65; Neches, 7.25; Sabine, 3.82; and coastal plains, 4.39.

RIVER CONDITIONS.

The streams of the district were practically at low water mark during the month. There was, however, ample water in the lower Rio Grande for irrigation and other purposes. Rises occurred in the Guadalupe and Colorado during the first decade, and in the Trinity during the last decade, but they were unimportant.

TABLE 1.—Climatological data for December, 1912. District No. 8, Texas and Rio Grande Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.							Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmetted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of overcast days.			
<i>Colorado.</i>																				
Blanca.	Costilla.	7,865	3	16.6	.....	44	15	-16	11	56	T.	0.91	0.46	8.8	0	27	3	1	w.
Cumbres.	Conejos.	10,015	19	13.1	-4.6	43	3	-21	7	47	0.18	+ 0.07	1.2	4.0	3	21	10	0	sw.	
Garnett.	Costilla.	7,576	9	9.3	.....	44	14	-29	6	60	0.44	.....	0.18	8.0	5	23	0	s.	nw.
Hermit.	Hinsdale.	9,843	5	9.3	.....	44	14	-29	6	60	0.44	.....	0.82	17.5	2	26	5	0	.....
La Veta Pass.	Costilla.	9,000	2	.....	.....	.....	.....	.....	1.11	.....	.....	.....	17.0	0	0	27	3	0	.....
Manassa.	Conejos.	7,700	6	17.5	.....	53	15	-13	7	58	T.	.....	T.	0	0	27	3	0	ne.
Platoro.	.....	9,675	5	.....	.....	.....	.....	.....	1.06	.....	.....	.....	17.0	7	23	5	3	w.	
Saguache.	Saguache.	7,740	20	17.3	-2.8	48	2	-14	7	51	0.27	+ 0.10	0.27	4.0	1	22	0	0	sw.	
San Luis.	Costilla.	7,794	21	16.4	-5.0	42	15	-20	7	47	0.41	- 0.01	0.40	6.1	2	21	9	1	P. B. Albright.	
Wagon Wheel Gap Experiment Station.	Mineral.	9,235	1	13.2	+ 0.2	38	15	-14	6	35	0.57	- 0.11	0.35	10.9	8	21	4	6	U. S. Weather Bureau.	
<i>New Mexico.</i>																				
Agricultural College.	Dona Ana.	3,863	51	36.2	- 6.3	62	1	8	23	43	0.30	- 0.14	0.15	3.5	4	19	5	7	N. Mex. Agricultural College.	
Alamogordo (near).	Otero.	4,338	15	35.5	- 5.4	59	2	12	27	39	0.45	- 0.15	0.23	3.2	5	21	5	5	Edward LéBreton.	
Alamogordo.	.....	4,320	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.51	5.0	2	.....	.....	.....
Alamos Ranch.	Sandoval.	7,800	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.70	0.28	8.0	3	25	4	s.
Albuquerque.	Bernalillo.	5,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.47	+ 0.09	0.47	T.	15	13	e.
Ancho.	Lincoln.	6,112	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.23	1.17	3.5	2	.....	.....
Anchor Mine.	Taos.	10,600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.96	0.62	14.0	5	16	9	w.
Artesia.	Eddy.	3,350	4	38.7	.....	69	17	10	24	52	0.85	.....	0.47	9.0	2	18	0	13	Will Benson, C. E.
Aspen Grove Ranch.	Rio Arriba.	9,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.63	0.19	10.3	7	15	1	.....
Batemans Ranch.	.....	8,900	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.60	0.20	7.9	5	23	4	w.
Berino.	Dona Ana.	3,788	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.35	4.0	1	.....	.....	.....
Bluewater.	Valencia.	6,732	10	23.8	- 3.4	62	4	- 20	23	61	0.16	- 0.18	0.16	2.0	1	15	14	2	n.	
Boaz.	Chaves.	4,154	3	36.4	.....	68	4	- 4	7	49	0.43	.....	0.25	7.0	2	26	2	3	sw.
Capitan.	Lincoln.	6,348	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.84	0.54	14.0	2	26	1	se.
Carlsbad.	Eddy.	3,120	17	40.4	- 2.4	70	17	12	21	50	0.82	+ 0.30	0.55	3.0	4	19	4	8	Junius D. Maupin.	
Carrizozo.	Lincoln.	5,429	4	31.6	.....	56	15	4	7	42	0.31	.....	0.28	4.5	2	24	5	2	J. C. Rishaberg.
Cerrillos (near).	Sante Fe.	5,700	27.0	52	37	- 3	7	46	11	.....	.....	.....	0.10	1.5	2	20	8	3	Bluewater Development Co.
Chama.	Rio Arriba.	7,851	14	19.7	- 6.3	45	13	- 9	7	42	0.33	- 1.72	0.12	4.5	3	24	6	1	Agent E. P. & S. W. R. R.	
Cloudcroft.	Otero.	8,650	10	28.4	+ 0.3	50	15	6	7	37	0.78	- 0.59	0.54	8.0	3	23	6	2	Harold H. Brook.	
Corona.	Lincoln.	6,666	3	30.2	.....	50	13	- 12	7	52	0.70	.....	0.49	11.0	4	21	3	7	Agent E. P. & S. W. R. R.
Coyote.	.....	5,900	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.28	0.20	3.5	5	26	1	w.
Cundiyo.	Santa Fe.	6,889	3	0.70	0.34	12.0	4	24	4	3	Do.
Demonstration Farm.	San Miguel.	6,800	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.29	0.18	2.5	2	.....	.....
Duran.	Torrance.	6,272	3	31.4	.....	56	15	- 4	7	38	0.43	.....	0.35	8.0	4	23	1	7	Erh & Westerman.
Escondido.	Otero.	4,014	3	.....	.....	62	2	10	23	.....	0.56	.....	0.21	4.0	4	26	2	3	Agent E. P. & S. W. R. R.
Espanola.	Rio Arriba.	5,590	14	22.6	- 5.9	52	1	- 7	24	43	0.28	- 0.02	0.12	4.5	5	19	8	4	sw.	
Estancia.	Torrance.	6,140	7	23.8	.....	51	4	- 17	7	50	0.35	- 0.31	0.19	8.5	4	18	4	9	Mrs. Ella F. McBride.
Fort Stanton.	Lincoln.	6,231	35	32.9	- 3.0	60	15	1	12	51	0.12	- 0.72	0.12	2.0	1	14	10	7	George H. Van Stone.	
Fort Sumner.	Guadalupe.	3,900	4	31.9	.....	66	14	- 8	24	54	0.37	.....	0.27	4.5	2	21	4	5	U. S. Sanitarium.
Gallinas.	Lincoln.	6,635	3	.....	.....	56	15	4	7	42	0.31	.....	0.28	7.2	3	18	0	13	Peter Yocky.
Gallinas Planting Sta.	San Miguel.	5,700	5	28.5	.....	61	14	- 1	21	48	0.58	.....	0.26	9.0	4	21	9	1	Agent E. P. & S. W. R. R.
Glorieta Ranch.	Socorro.	5,700	2	.....	.....	51	4	- 4	7	40	2.00	.....	0.96	36.2	5	23	2	6	Chas. M. Crossman.
Harveys Upper Ranch.	San Miguel.	9,400	3	24.1	.....	47	13	0	7	38	0.47	.....	0.17	10.0	5	22	5	4	R. B. Schoonmaker.
Hobbs.	Eddy.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	3.3	7	19	7	5	E. H. Byers.
Hondo Reservoir.	Chaves.	3,904	3	35.4	.....	69	14	- 2	7	47	0.74	.....	0.42	7.5	3	22	5	4	U. S. Reclamation Service.
Jemez Springs.	Sandoval.	6,100	27	28.8	50	37	4	7	34	40	0.20	0.40	0.20	4.0	3	23	3	3	Mrs. L. J. Boyd.	
Knowles (near).	Eddy.	4,300	2	37.8	.....	68	14	- 11	21	47	0.49	.....	0.15	2.2	5	21	4	6	Gus Weiss.
Laguna.	Valencia.	5,840	7	25.2	.....	51	4	- 4	7	41	0.50	.....	0.36	8.0	2	18	7	6	P. A. Turnbull.
Legunita.	Guadalupe.	4,500	7	32.4	.....	58	15	- 5	7	43	0.24	.....	0.16	4.5	2	18	5	5	William P. Keil.
Lake Valley.	Sierra.	5,412	7	.....	.....	52	11	- 14	7	52	0.37	.....	0.45	10.8	6	21	5	4	Mrs. L. J. Boyd.
Lakewood (near).	Eddy.	3,170	3	38.9	.....	70	11	14	7	52	0.95	.....	0.45	10.8	6	21	5	4	Agent E. P. & S. W. R. R.
Lanark.	Dona Ana.	4,156	13	64	14	- 9	7	52	0.18	0.50	+ 0.03	4.2	5	18	0	3	Agent So. Pac. R. R.
Las Vegas.	San Miguel.	6,385	25	28.7	- 4.0	64	14	- 9	7	52	0.18	0.43	0.12	3.2	3	28	3	0	H. G. Liston.
Liston.	Chaves.	5,000	2	.....	.....	51	31	- 3	28	48	1.85	.....	0.95	8.0	2	21	6	4	Richard Pohl.
Los Lunas (near).	Valencia.	4,900	23	27.6	- 5.8	55	31	- 3	28	48	T.	- 0.44	.....	0.16	15	0	0	0	.....
Magdalena.	Socorro.	6,557	7	27.4	.....	52	14	- 2	7	36	0.76	.....	0.54	12.0	3	20	6	5	William Pender.
Mescalero.	Otero.	6,827	1	30.4	.....	52	15	6	7	36	0.49	.....	0.26	5.3	4	21	4	6	Rev. R. H. Harper.
Mineral Hill.	San Miguel.	7,050	7	.....	.....	51	37	0	24	44	0.53	.....	0.30	6.5	2	23	6	2	W. M. Nelson.
Montrey.	Otero.	4,436	3	.....	.....	51	37	0	24	44	0.22	.....	0.20	2.0	2	25	4	2	Agent E. P. & S. W. R. R.
Mountainair.	Torrance.	6,547	10	26.0	- 4.9	56	2	- 14	7	44	1.22	- 0.11	0.44	13.6	5	20	2	9	Miss Julius Hill.	
Newman.	Otero.	3,989	3	.....	.....	51	37	0	24	48	0.34	.....	0.18	1.4	3	18	4	9	Agent E. P. & S. W. R. R.
Noria.	Dona Ana.	4,114	3	.....	.....	51	37	0	24	48	0.40	.....	0.20	1.0	3	18	0	13	Eugene F. Jones.
Orogrande.	Otero.	4,171	3	.....	.....	51	37	0	24	48	0.42	.....	0.25	3.0	2	17	7	7	A. M. Hove.
Oscuro.	Lincoln.	5,016	3	.....	.....	51	37	0	24	48	0.89	.....	0.74	9.0	4	22	2	7	Beul. Lasswell.
Otis.	Eddy.	3,100	3	.....	.....	51	37	0	24	48	0.92	.....	0.45	5.0	6	22	2	7	Agent E. P. & S. W. R. R.
Pastura.	Santa Fe.	6,200	3	.....	.....	51	37	0	24	48	0.10	.....	0.10	2.0	1	27	1	3	George E. Ellis.
Placitas (near).	Bernalillo.	5,285	3	26.3	.....	52	15	2	7	38	0.93	.....	0.36	19.5	4	21	9	1	L. P. Adair.
Plainview (

TABLE 1.—Climatological data for December, 1912. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.						Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmeasured.								
<i>New Mexico—Contd.</i>																						
Vaughn.	Guadalupe.	5,952	3								0.46		0.25	8.5	4	16	4	11	w.	Agent E. P. & S. W. R. R.		
Virsylvia.	Taos.	7,500	2	14.2		53	1	-22	22	49	0.22		0.18	3.0	4	19	10	5	s.	Dr. I. N. Woodman.		
Willard.	Torrance.	6,086	16	26.2		57	9	-17	7	54	0.25		0.15	4.8	2	25	1	5	sw.	Dr. Volney S. Cheyney.		
Winsors.	San Miguel.	8,200	16	26.7	-0.3	52	13	-5	21	43	0.50	-0.53	0.15	10.0	6	18	12	1	sw.	James F. Matty.		
<i>Texas.</i>																						
Abilene.	Taylor.	1,738	27	43.4	-1.6	69	4	25	27	36	1.31	+ 0.18	0.53	0.1	6	15	5	11	sw.	U. S. Weather Bureau.		
Albany.	Shackelford.	1,429	18	41.2	-3.1	70	1†	20	11†	43	1.63	-0.04	0.62	0	3	18	4	9	n.	N. L. Bartholomew.		
Alice.	Jim Wells.	209	1	55.4		80	1	30	24	36	0.92		0.25	0	5	10	4	17	n.	R. M. Boerum.		
Alpine.	Brewster.	4,482	2								2.09		0.84	0	3	16	4	11	n.	H. B. Cowles.		
Alvin.	Brazoria.	49	14	52.0		78	1	30	7†	32	9.76	+ 6.08	2.05	0	10	6	2	23	n.	Alvin Japanese Nursery.		
Anahuae.	Chambers.	23	3								10.12		2.55	0	14	1	1	22	n.	Lone Star Canal Co.		
Antelope.	Jack.	1									0.86		0.35	0.5	3	17	10	4		Paul Rudolph.		
Aspermont.	Stonewall.										0.42		0.19	1.5	3	22	1	8	n.	Bryant Link Co.		
Austin.	Travis.	593	56	47.9	-3.2	72	5	31	13	31	2.60	+ 0.26	0.80	0	8	12	3	16	nw.	A. Deussen.		
Ballinger.	Runnels.	1,637	16	45.2	0.0	71	1†	23	24	42	1.38	+ 0.25	0.40	T.	4	12	1	18	n.	E. M. Eubank.		
Barstow.	Ward.	2,573	5	43.4†		70	16	12	19	53	1.50		0.76	0	2	26	1	4	w.	F. P. Ingerson.		
Bay City.	Matagora.	53	2	55.8		88	5	34	25	42	5.48		1.47	0	15	9	0	22	n.	E. C. Quereau.		
Beaumont.	Jefferson.	29	11	53.5	-0.2	81	5	31	27	32	13.39	+ 10.13	3.37	0	13	11	0	20	ne.	John Bender.		
Beeville.	Bee.	225	16	53.6	-1.1	80	5	31	24	36	1.54	-0.29	0.50	0	9	8	1	22	n.	L. E. Dickey.		
Big Springs.	Howard.	2,396	14	43.2	-1.7	70	14	19	27	40	0.99	+ 0.55	0.61	0.7	5	14	8	9	s.	B. Reagan.		
Blanco.	Blanco.	1,350	16	46.4	-2.0	65	1†	23	24	31	1.11	+ 0.06	0.50	2.0	5	15	4	12	n.	R. C. Crist.		
Boerne.	Kendall.	1,412	20	48.3	-1.1	72	4†	21	22	35	2.18	+ 0.13	0.90	0	12	7	3	21	n.	F. W. Schweppe.		
Booth.	Fort Bend.	81	11								7.07	+ 3.33	1.40	0	14	10	0	21	ne.	T. R. Booth.		
Bowie.	Montague.	1,113	17	43.4	-1.8	71	1	23	24	40	1.11	+ 0.06	0.50	2.0	5	15	4	12	n.	Craig Anderson.		
Brady.	McCullough.	1,500	11	55.6		81	15	28	7†	42	1.13		1.10	0.1	3	18	4	9	s.	Prof. J. O. Wallace.		
Brazoria.	Brazoria.	25	23	55.8	-0.2	82	5	30	19	40	6.62	+ 3.22	1.64	0	15	14	2	15	n.	Mrs. M. A. Stevens.		
Brazos.	Palo Pinto.	801	3								1.65		0.76	T.	5	11	13	7	n.	Robt. E. Boyett.		
Brenham.	Washington.	350	27	48.8	-4.0	73	5	31	24	29	6.98	+ 3.50	1.52	0	13	6	1	24	n.	Mrs. B. F. Sloan.		
Bridgeport.	Wise.	754	3								0.66		0.40	0	5	10	8	13	s.	Claud Strange.		
Brighton.	Nueces.	12	19	54.8	-3.0	80	4	32	24	34	2.09	+ 0.78	0.70	0	7	13	1	17	n.	G. H. Ritter.		
Brownsville.	Cameron.	38	48	57.6	-3.9	80	4	34	28	34	1.51	+ 0.06	0.30	0	15				n.	U. S. Weather Bureau.		
Brownwood.	Brown.	1,342	20	44.8	-2.1	79	15	23	27†	49	2.19	+ 0.59	0.75	0	5	11	8	12	n.	Mrs. Pearl Smith.		
Buena Vista.	Pecos.										1.35		1.28	T.	2				n.	W. H. Denis.		
Cameron.	Milan.	4	44.8			74	4	26	23	34	5.43		1.37	0	16	13	3	15	se.	J. E. Watts.		
Carmona.	Polk.	330	4	48.0		73	5	24	25	40	7.62		1.40	T.	17	10	8	12*	s.	M. S. Spitzer.		
Carrizo Springs.	Dimmit.																		n.	M. E. Cook.		
Claytonville.	Fisher.	2,100	17	42.4	-3.1	61	16†	21	24	36	0.27	-0.80	0.27	0	1	25	0	6	n.	Wm. Lanius.		
Clifton.	Bosque.	671	1								2.37		0.88	T.	12	10	4	17	n.	R. M. Jones.		
Coleman.	Coleman.	1,710	18	45.8	-1.0	72	16	25	24	35	1.86	+ 0.36	0.83	0	5	11	10	11	sw.	J. E. Stevens.		
Collegeport.	Matagora.	51.4	5			74	5	28	24	36	1.20		0.90	0	9	10	0	12	n.	H. A. Clapp.		
College Station.	Brazos.	308	22	48.6	-5.0	73	5	28	24	31	5.33	+ 1.99	1.29	0	16	8	4	19	n.	Prof. G. S. Fraps.		
Colorado.	Mitchell.	2,066	18	46.2	-0.3	71	16	18	27	47	1.90	+ 1.16	1.10	0	4				n.	R. M. Webb.		
Columbia.	Brazoria.	34	23								1.80		1.80	0	1	11	4	16	s.	R. B. Loggins.		
Colorado.	Colorado.	206	8								6.63		3.60	0	12	6	5	20	n.	Mrs. Sophie Bridge.		
Corpus Christi.	Nueces.	20	25	54.7	-1.9	77	3	36	24	25	1.53	+ 0.21	0.35	0	13	3	7	21	n.	U. S. Weather Bureau.		
Corsicana.	Navarro.	445	23	44.2	+ 4.6	70	5	27	24†	30	3.43	+ 0.66	0.83	0	11	10	4	17	s.	D. H. Winn.		
Cotulla.	La Salle.	425	5								1.20		0.90	0	2				n.	Holland Agricultural Co.		
Crockett.	Houston.	350	8	48.8		79	5	27	24	31	5.87		1.54	0	11	11	4	16	s.	A. M. Rencher.		
Cuero.	De Witt.	177	22	51.1	-3.2	70	4	29	24†	36	2.49	+ 0.40	0.92	0	10	6	0	25	s.	H. R. Frobes.		
Dallas.	Dallas.	466	23	44.0	-0.9	69	15	25	13†	40	2.42	-0.15	1.02	T.	10	10	2	19	s.	G. A. Eisenlohr.		
Danevang.	Wharton.	145	16	53.2	-0.9	80	1	30	18†	38	4.32	+ 0.58	1.62	0	9	13	3	15	n.	H. P. Hermansen.		
Del Rio.	Valverde.	952	6	47.6	-4.8	76	1	24	24	41	1.76	+ 0.20	0.56	0	11	8	6	17	nw.	U. S. Weather Bureau.		
Devine.	Medina.	653	2	47.8		78	20	26	23	42	4.25		1.40	0	8	12	5	14	n.	M. A. Keller.		
Dialville.	Cherokee.	575	8	48.5		72	5	26	24	33	5.65		1.45	0	10	11	5	15	s.	J. M. B. McKnight.		
Dilley.	Frio.	569	2								1.80		1.80	0	1				n.	John W. Miller.		
Dublin.	Erath.	1,466	16	43.6	-2.5	71	2†	24	24	38	2.27	+ 0.47	0.89	0	7	12	1	17*	n.	Jno. O. Shafer.		
Duval.	Travis.	820	23	47.2	-5.7	72	5	30	24	29	2.60	+ 0.22	0.92	0	8	12	3	16	n.	J. C. Edgar.		
Eagle Pass.	Maverick.	800	35	50.3	-2.1	76	5	28	24	39	1.95	+ 1.06	0.90	0	8	10†	2	13†	n.	Charles Tarver.		
Eastland.	Eastland.	1,420	5	47.4		84	31	20	24†	61	2.20		0.90	T.	5	12	0	19	s.	James A. Beard.		
Edna.	Jackson.	71	3								3.61		1.10	0	8				n.	E. L. Faires.		
El Paso.	El Paso.	3,762	33	40.0	-4.8	62	2	17	23	31	0.48	-0.04	0.17	3.2	5	17	9	5	nw.	U. S. Weather Bureau.		
Encinal.	La Salle.	558	4	48.8		70	1	30	25	35	1.85		1.10	0	3	11	0	20	n.	Walter Pettit.		
Fairland.	Burnet.	1,000	23																n.	R. L. Bush.		
Falfurrias.	Brooks.					84	1	29	19	43	1.46		0.61	0	5	9	8	14	nw.	W. A. Gardner.		
Flinton.	Fayette.	465	4	50.6		75	5	30	24	30	4.32		1.44	0	12	8	6	17	n.	Fred W. Laux.		
Flint.	Smith.	483	2	46.0		71	5	25	24	34	4.49		0.89	0	11	10	4	17	ne.	F. C. C. Carter.		
Fort Clark.	Kinney.	1,050	41	46.7	-5.3	72	1†	25	24	35	1.90	+ 0.85	0.90	0	5	20	0	11	n.	Post Hospital.		
Fort Davis.	Jeff Davis.	5,000	33								1.35	+ 0.77	1.10	0	2				n.	C. H. Bird.		
Fort McIntosh.	Webb.	46																				

TABLE 1.—Climatological data for December, 1912. District No. 8—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.				Precipitation, in inches.				Sky.	Prevailing wind direction.	Observers.								
				Mean.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unadjusted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.					
Texas—Continued.																						
Hewitt.	McLennan.	664	17							2.48	+ 0.18	0.58	T.	11	0	15	2	14	n.			
Hico.	Hamilton.		1							1.89		0.73		0	7					I. H. Earle. John A. Eakins.		
Hillsboro.	Hill.	628	9	51.7	76	6	24	24	43	2.10		1.25		0	3					W. G. Escott. H. E. Haass.		
Hondo.	Medina.	901	13	47.9	73	5	26	24	38	2.35	+ 1.03	1.00		0	8	11	3	17	n.	U. S. Weather Bureau. W. Y. Barr.		
Houston.	Harris.	138	22	53.6	- 0.9	78	1	35	24	25	10.09	+ 7.09	2.21		0	13	8	6	17	n.	Wichita Valley Ry. Co. Earle Adkison.	
Huntsville.	Walker.	400	28	48.4	- 3.4	71	5	20	25	40	6.10	+ 2.57	1.60		0	8	8	0	23	w.	Judge John S. Durst. B. J. Hubbard.	
Jayton.	Kent.		2										0.30		0	2	25	6		ne.	Robert E. Horne.	
Jewett.	Leon.	496	8	45.8		70	5†	25	24†	35	5.50		1.60		0	5	14	6	11	n.	J. E. Root, Jr. Jos. Tweedy.	
Junction.	Kimble.	1,645	11	43.0		74	17	18	30	47	1.52	+ 0.49	0.67		0	4	7	12	2	17	ne.	T. A. Johnson. August Hermes.
Kaufman.	Kaufman.	448	13	45.8	- 1.4	69	5	25	27	31	2.80	- 0.73	0.84	T.	7	13	5	13	13	n.	S. D. Austin. Mrs. K. I. Webber.	
Kerrville.	Kerr.	1,650	16	45.8	- 2.3	72	15	18	30	42	0.54	- 1.10	0.42	T.	2	13				ne.	Jno. G. Kennedy. Mrs. A. H. Jackson.	
Killeen.	Bell.																			Matt Cody. Mrs. Fannie Sneed.		
Knickerbocker.	Tom Green.	2,050	8	45.1		72	4	23	24†	39	1.36		0.90	0.5	6	16	6	9	9	s.	E. W. Torrence. M. D. Wardlow.	
Kopperl.	Bosque.	576	15								1.85	- 0.56	0.80		0	3	9	9	13	nw.	Geo. W. Ellis. C. A. Propst.	
Lagrange.	Fayette.	276	2								6.62		2.75		0	13	13	0	18	nw.	A. L. Paschall. T. A. King.	
Lamesa.	Dawson.	2,500	2								0.71		0.30		2.0	4					H. Killingsworth. Rev. A. P. Willis.	
Lampasas.	Lampasas.	1,026	20	44.8	- 4.4	72	4†	22	30	43	1.77	- 0.06	0.44	0.7	9	14	0	17	n.	B. E. Cochran. W. L. Jones.		
La Parra.	Willacy.	38	10								2.30	+ 1.23	0.60		0	7					Lee Scott. W. E. McNabb.	
Laredo.	Webb.	421									2.45		0.98		0	18					Miss Josephine Newman. J. Harvey Clark.	
Laureles Ranch.	Nueces.	20	12																	A. R. Shearer. A. G. Beecroft.		
Liberty.	Liberty.	38	8	53.0		80	1	29	19†	36	11.79		2.40		0	12	5	15	11	n.	Geo. W. Smith. Miss Mary Hofmann.	
Llano.	Llano.	1,040	21	45.5	- 5.1	71	5†	24	30	40	1.75	+ 0.51	0.60	1.0	10	12	12	12	n.	J. Giesecke. A. R. Conway.		
Llano Grande.	Hidalgo.	86	4	53.4		82	4	32	24	46	1.30		0.50		0	4	8	11	12	n.	E. H. Snider. Earnest De Vilbiss.	
Long Lake.	Anderson.	229	7								5.84		1.15		0	9	9	2	20	n.	R. B. Pointer. J. F. Sander.	
Lubbock.	Gregg.	336	26	45.4	- 3.2	70	1†	29	14†	32	4.32	+ 0.16	1.55		0	11	13	0	18	ne.	J. H. Bickford. W. T. Mann.	
Lufkin.	Lubbock.	1									0.38		0.15		1.1	5	25	2	4	sw.	S. M. Davis. C. H. Pease.	
Luling.	Angelina.	418	23	49.5	- 2.4	72	5†	29	24	31	4.88	+ 2.79	2.00		0	12	7	6	3	n.	P. L. Shaffer. D. N. Garza.	
McGregor.	Caldwell.	713	2								0.65		0.68		0	1	18	2	11	n.	Mrs. C. W. Higdon. Mack Dunkin.	
McKinney.	Collin.	612	10	43.9		69	1	22	24	42	2.15	- 1.66	0.96	1.0	10	13	2	16	s.	W. F. M. Ross. Reiffert & Frobese.		
Marathon.	Brewster.	4,043	2	39.3		66	1	12	23	32	2.97		1.00	1.0	0	7	7	11	13	n.	Jas. Johnston. L. M. Crockett.	
Marble Falls.	Burnet.	771	4								1.33		0.60		0	6	4	0	27	n.	F. A. Wilson. J. B. McAllen.	
Marfa.	Presidio.										0.85		0.85		0	1					E. H. C. Ford.	
Marshall.	Harrison.	375	11	46.4		71	1	26	13	36	4.72	- 0.14	1.07		0	10	9	4	18	n.	Jas. Burns. J. B. Wright, Jr.	
Matagorda.	Matagorda.	12	2								5.29		1.93		0	12	17	6	8	n.	O. H. Albert. S. C. Lee.	
Mexia.	Limestone.	537	8	45.2		69	5	25	24	34	4.14		1.33	T.	11	9	2	20	s.	J. Giesecke. A. R. Snider.		
Midland.	Midland.	5	43.8			68	14	21	23	38	0.85		0.60	1.0	3	9	16	6	sw.	F. A. Wilson. J. B. McAllen.		
Mission.	Hidalgo.	140	2	58.8		84	1†	36	25	44	1.00		0.55		0	4	5	13	13	n.	Miss L. C. Ford. J. D. Reagan.	
Mont Belvieu.	Chambers.	65	2								16.57		2.60		0	12	7	10	14	n.	H. Pratt. Paul C. Rudat.	
Montell.	Uvalde.										2.02		0.73		0	10	7	10	14	n.	L. V. Bigham. U. S. Weather Bureau.	
Mount Blanco.	Crosby.	2,750	23	38.2	- 3.1	67	14†	12	24	45	0.15	- 0.46	0.05	1.5	5	20	2	9	sw.	F. W. Oates. J. K. Ball.		
Nacogdoches.	Baylor.	271	13	45.6	- 2.7	68	1	25	25	68	6.49	+ 2.18	1.50		0	9	12	4	14	n.	W. H. Whitley. F. W. G. Grewe.	
New Braunfels.	Comal.	720	23	48.6	- 4.3	72	5	28	25	32	3.35	+ 1.08	0.91		0	8	11	3	17	e.	Geo. W. Smith. Miss Mary Hofmann.	
Palestine.	Anderson.	510	30	46.8	- 2.6	70	5	28	27	47	4.77	+ 1.10	1.19		0	12	8	7	16	sw.	J. Giesecke. A. R. Shearer.	
Panter.	Hood.	1,000	23								2.02	+ 0.11	0.90		0	5	7	10	15	se.	A. G. Beecroft. P. L. Shaffer.	
Pearlsall.	Frio.	629	2								2.51		1.02		0	8					D. N. Garza. Mrs. C. W. Higdon.	
Pierce.	Wharton.	102	6	51.3		79	1	29	25	38	4.54		0.88		0	12	11	0	20	n.	Mack Dunkin. R. B. Pointer.	
Plainview.	Hale.	3,370	16	38.4	- 5.5	68	14	6	24	46	0.40	- 0.13	0.19	3.0	4	16	12	3	11	n.	J. F. Sander. J. H. Bickford.	
Port Lavaca.	Calhoun.	20	11	54.3	- 1.9	78	1	30	24	27	1.78	- 1.09	0.42		0	7	5	12	14	n.	W. T. Mann. S. M. Davis.	
Post.	Garza.	2,700	2								0.62		0.26	1.5	6	15	8	8	8	w.	C. H. Pease. P. L. Shaffer.	
Putnam.	Callahan.	1,591	1								1.10		0.40		0	3	18	6	7	nw.	D. N. Garza. Mrs. C. W. Higdon.	
Raymondville.	Cameron.										1.99		0.41		0	15	5	11	15	se.	J. Giesecke. A. R. Shearer.	
Ricardo.	Nueces.	57	3								2.72	+ 1.35	2.00		0	2					J. B. Wright, Jr. O. H. Albert.	
Rio Grande.	Starr.	36									1.20	+ 0.43	0.80		0	3	11	0	20	n.	S. C. Lee. J. Alleu Weaver.	
Riverside.	Walker.	169	8								6.50		1.60		0	9	8	1	22	n.	Ed. Herbert. C. R. Myers.	
Rockland.	Tyler.	138	8								5.70		1.40		0	9	14	3	14	n.	H. Pratt. Paul C. Rudat.	
Rockport.	Aransas.	12	11	54.8	- 2.6	75	1†	35	24	35	2.19	- 0.94			0	10	10	5	16	n.	J. F. Sander. J. H. Bickford.	
Rossville.	Atascosa.	558	5	51.0		74	5	29	24†	36	3.31		1.43		0	10	6	11	14	n.	W. Goodrich Jones. W. B. Oates.	
Runge.	Karnes.	308	17								1.55	- 0.76			0	5	7	8	19	n.	J. K. Ball. W. H. Gisler.	
Sabinal.	Uvalde.	964	8	46.9		71	5†	24	24	35	2.06		0.85		0	7	2	8	11	n.	F. M. Getzendaner. Valentine Development Co.	
Salado.	Bell.	2									1.70		0.73		0	5	4	2	25	n.	Frank Fitzpatrick. C. C. Zirjacks.	
San Angelo.	Tom Green.	1,847	21	39.0	- 7.1	67	29	24	5†	33	2.07	+ 0.94	1.89		0	2	14	3	14	n.	E. H. Hall. E. H. Crockett.	
San Antonio.	Bexar.	701	27	49.8	- 3.3	74	5	31	24	34	2.76	+ 1.20	1.05		0	12	7	5	19	n.	F. A. Wilson. J. B. McAllen.	
San Augustine.	San Augustine.	360	3	48.0		71	17	24	26	37	8.54		1.75		0	14	12	3	16	n.	Miss L. C. Ford. J. D. Reagan.	
San Juanito.	Hidalgo.	3	57.0			83	1	36	25	34	1.95		0.81		0	11	4	23	nw.	H. Pratt. Paul C. Rudat.		
San Marcos.	Hays.	588	19	47.6	- 2.9	71	5	29	25	33	3.02	+ 1.23	0.70		0	7	8	0	23	n.	J. B. Wright, Jr. O. H. Albert.	
San Saba.	San Saba.	1,712	11	45.2	- 3.2	73	16	19	30	39	1.79	+ 0.94	1.12		0	7	12	6	13	n.	S. C. Lee. J. Alleu Weaver.	
Santa Gertrudes.	Nueces.	12									2.72	+ 1.35	2.00		0	2						

TABLE 2.—*Daily precipitation for December, 1912. District No. 8, Texas and Rio Grande Valley.*

TABLE 2.—*Daily precipitation for December, 1912. District No. 8—Continued.*

TABLE 2.—*Daily precipitation for December, 1912. District No. 8—Continued.*

* Precipitation included in that of the next measurement.

† Separate dates of falls not recorded.

Precipitation for the 24 hours ending on the morning when it is measured.
T Precipitation is less than 0.01 inch rain or melted snow.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—Maximum and minimum temperature for December, 1912. District No. 8, Texas and Rio Grande Valley.

Date.	Colorado.				New Mexico.										Texas.													
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountain-air.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Brownsville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	37	13	39	17	62	34	70	33	57	24	55	18	50	30	62	35	40	23	57	36	68	44	67	34	78	61	74	65
2....	41	1	39	18	60	37	68	34	54	20	56	20	49	25	50	30	40	27	49	23	58	32	57	34	76	60	68	58
3....	43	5	42	9	59	40	69	33	53	25	52	18	45	25	61	31	42	26	56	31	60	45	64	44	79	67	77	63
4....	42	0	40	11	60	25	63	31	56	23	50	17	48	20	67	23	39	21	58	22	69	42	64	36	80	59	70	61
5....	25	9	27	10	49	25	59	32	58	17	42	6	38	15	48	30	28	14	43	24	55	37	60	37	77	56	67	61
6....	25	-15	17	-13	32	28	58	22	32	12	32	8	26	10	34	10	21	5	32	29	44	27	73	52	65	42		
7....	18	-21	23	-20	34	20	56	19	45	9	30	-14	38	-1	30	0	30	8	40	-6	47	28	47	28	54	40	52	40
8....	39	-15	24	-14	45	25	39	28	38	25	28	6	30	18	43	29	33	13	40	22	42	37	42	35	51	42	46	
9....	30	-3	36	-1	45	31	39	30	52	25	42	22	32	23	37	35	36	24	42	31	44	36	44	32	52	46	53	47
10....	27	-10	32	-1	47	31	50	30	40	28	40	13	44	12	53	30	37	18	51	29	53	40	61	39	64	47	57	51
11....	32	-12	35	-5	49	24	46	29	58	28	38	6	44	12	42	25	37	15	40	27	42	30	51	31	64	48	56	48
12....	35	-10	35	-7	50	25	44	25	52	1	40	5	45	11	40	25	37	15	50	20	46	26	45	23	57	41	48	40
13....	35	-5	39	-3	49	25	45	29	48	18	42	12	50	16	48	24	44	19	63	27	49	37	53	35	56	41	52	40
14....	39	-6	38	-4	54	22	69	28	55	20	45	17	55	25	68	22	48	23	63	33	64	38	70	40	64	50	58	50
15....	35	-8	47	0	60	24	70	27	60	20	50	10	50	20	62	23	53	24	60	26	60	30	62	31	67	54	60	54
16....	34	2	37	17	55	31	67	40	48	28	48	15	45	25	58	30	36	23	52	34	67	42	64	41	75	53	73	54
17....	28	11	27	6	55	23	60	30	38	22	40	9	40	28	53	29	32	15	52	32	61	39	60	37	75	59	73	48
18....	32	-5	23	-3	50	24	54	26	44	18	45	10	40	12	50	19	33	8	51	16	51	32	55	24	65	48	64	48
19....	39	-8	31	5	51	13	58	18	45	17	40	8	54	15	57	16	41	15	57	28	64	36	65	28	69	35	66	44
20....	29	-5	31	8	55	21	50	19	43	15	34	7	38	15	46	22	29	17	45	15	49	34	55	35	74	55	67	56
21....	24	-14	29	-10	52	18	46	12	38	1	34	0	34	12	43	15	33	10	38	9	44	27	40	36	69	54	62	50
22....	26	-11	22	-5	33	25	39	27	28	12	36	13	30	15	32	20	24	11	31	21	37	30	36	27	56	48	50	46
23....	30	-12	28	-5	42	8	45	14	45	11	32	-4	40	10	29	-1	30	8	44	6	40	28	36	23	53	44	51	42
24....	32	-11	33	-5	46	10	52	12	51	10	40	7	45	12	38	-2	36	10	54	24	53	25	52	20	55	39	52	36
25....	33	-7	34	9	52	15	66	16	54	9	45	8	46	20	39	7	36	13	54	21	57	35	57	28	66	38	59	40
Mns.	32.5	-6.3	32.7	0.0	49.8	22.6	55.5	25.3	48.5	17.3	41.7	10.3	42.1	16.7	48.2	20.4	36.0	15.8	50.1	22.9	53.0	33.7	54.7	31.6	66.4	48.7	60.6	48.8

Texas.

Date.	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	76	52	61	42	83	55	68	47	74	50	75	63	75	61	78	60	71	50	68	57	58	42	69	61	69	52	67	58
2....	66	47	62	42	74	59	63	37	58	37	68	53	72	54	67	55	70	48	60	44	51	59	66	50	55	31	59	43
3....	60	49	55	44	69	57	67	42	53	41	68	58	65	52	61	55	58	41	52	43	62	34	60	50	60	43	56	47
4....	68	43	60	40	70	50	67	39	59	49	68	60	71	60	72	61	68	55	61	62	62	26	69	58	66	45	54	
5....	76	46	51	40	78	52	61	49	60	37	72	61	74	56	75	61	68	55	70	47	53	30	74	53	61	41	72	48
6....	53	37	40	27	74	45	55	28	37	31	65	53	56	41	61	46	64	41	48	36	34	22	55	37	42	30	48	32
7....	47	37	35	26	59	42	40	28	53	29	57	46	48	38	58	42	58	41	47	34	44	10	51	37	50	31	48	33
8....	48	44	41	30	56	40	38	34	50	43	52	46	49	45	50	45	54	39	46	40	49	43	47	31	47	40	40	40
9....	45	42	43	35	54	46	40	36	43	33	55	44	49	47	56	43	52	37	48	36	45	29	51	44	45	40	40	40
10....	45	42	50	33	54	46	54	38	53	39	64	51	53	46	47	54	39	47	41	52	31	50	45	55	41	46	42	
11....	49	38	50	28	55	45	52	35	49	38	66	51	49	36	62	48	52	39	48	42	40	19	52	41	48	33	49	41
12....	41	37	50	27	52	37	43	34	51	38	48	38	48	36	55	40	42	36	40	17	41	37	49	21	41	35	57	
13....	44	40	48	28	56	40	60	29	56	31	49	38	53	36	55	37	52	33	54	35	62	28	55	35	52	31	53	
14....	49	42	56	29	59	35	70	43	56	41	58	48	56	40	58	44	61	33	57	39	68	22	54	39	60	21	54	38
15....	68	44	60	30	63	40	73	39	45	36	63	54	61	46	66	49	54	33	52	30	63	27	70	39</				